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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/661,177

09/12/2003

Steven Carl Crusius

79287

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22242 7590 10/09/2007
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EXAMINER

AMRANY, ADI

ART UNIT

PAPER NUMBER

2836

MAIL DATE

DELIVERY MODE

10/09/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/661,177

Applicant(s)

CRUSIUS ET AL.

Examiner

Adi Amrany

Art Unit

2836

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed September 18, 2007 have been fully considered but they are not persuasive. Several of the references from applicants' Information Disclosure Statements show a backup battery connected to the DC bus (first conduction path) in a diode OR'ing configuration.

Claim Objections

2. Claim 10 is objected to because of the limitation of "having a mains input voltage" is unclear. The phrase does not sufficiently distinguish between an AC input to the DC voltage supply (as a distinct limitation) or the output of the DC voltage supply (as the main source of power input to the rest of the system).

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-8 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peplinski (US 2003/0063715) in view of Furukawa (US 6,225,708) from applicants' IDS.

With respect to claim 10, Peplinski discloses a battery backup apparatus (fig 2; par 23) for use with a barrier movement operator (item 106; par 19), comprising:

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a DC voltage supply (fig 6, output of item 204; par 21, lines 1-6; par 41)
having a mains input voltage;

a DC power connection from the DC voltage supply to a barrier movement
control (fig 2, item 43; par 20, lines 12-17);

a battery having a first and second terminals (fig 6b, item B1; page 4, par
36);

a first conduction path and second conduction path (fig 6a, output of item
204 and electrical ground; par 41) connected to the DC voltage supply;

a battery charging circuit (fig 6a, item 210; page 4, pars 39 and 42-44) for
receiving a DC voltage from the DC voltage supply via the first conduction path
and the second conduction path and for charging the battery when the DC
voltage from the DC voltage supply exceeds a predetermined voltage (par 37);
and

a third conduction path comprising a unidirectional isolation device (fig 6a,
item D1; page 4, par 42, lines 3-5) connecting a battery DC voltage from the first
battery terminal to the Dc voltage supply via the first conduction path (figure 6a).

The Peplinski third conduction path is the lead line connecting diode D1 to the
battery (point 2) and the DC voltage supply (point 3). Peplinski does not expressly
disclose the isolation device connects the battery and DC voltage supply during mains
voltage input failure. Furukawa discloses a battery backup apparatus (fig 2; col. 5-6)
comprising a DC supply (item 32), a first conduction path (connection between nodes A
and D), a second conduction path (ground), a battery charging circuit (item 48), and a

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third conduction path (connection between nodes B and D) comprising a unidirectional isolation device (item 42) connecting a battery DC voltage from the first battery terminal to the DC voltage supply via the first conduction path (A-D) when the mains voltage input fails (col. 7, lines 23-42).

Peplinski and Furukawa are analogous because they are from the same field of endeavor, namely battery backup systems. At the time of the invention by applicants, it would have been obvious to one skilled in the art to replace the switching system disclosed in Peplinski with the diode OR'ing system disclosed in Furukawa in order to instantaneously initiate backup power upon a loss of mains power to avoid the delay time of a controller (Furukawa; col. 7, lines 33-35).

With respect to claim 2, Peplinski and further discloses an audible signaling device (fig 2, item 180; page 3, par 24).

With respect to claim 3, Peplinski further discloses an apparatus (page 3, par 25-26) for enabling the audible signaling device in response to current flowing from the battery to the DC voltage supply via the unidirectional isolation device.

With respect to claim 4, Peplinski discloses the battery backup apparatus of claim 10, as discussed above, and further discloses one or more visual signaling devices (page 3, pars 32-33). Peplinski discloses that the battery backup apparatus can connect to the Internet and transmit fax messages to inform the user of system conditions.

With respect to claim 5, Peplinski further discloses the battery charging device comprises circuitry for limiting a current applied to the first battery terminal (fig 6a, item R1; page 4, par 44).

With respect to claim 6, Peplinski further discloses the circuitry for limiting, limits the current to an amount less than a predetermined maximum amount (page 4, par 44, lines 1-2). Peplinski discloses that the current limiting circuitry has a threshold of 380mA.

With respect to claim 7, Peplinski further discloses cut out circuitry (fig 6b, items K1, K2, S1 and S2; page 4, pars 37 and 38) for disconnecting the first battery terminal from the unidirectional device.

With respect to claim 8, Peplinski further discloses cutout circuitry (fig 6b, items K1-4, S1 and S2; page 4, par 38) for disconnecting the first battery terminal from the battery charging device.

With respect to claim 11, Peplinski discloses the predetermined voltage is 18 volts (par 41). At the time of the invention by applicants, it would have been obvious to one skilled in the art to reconfigure the predetermined voltage to be greater than 20 volts since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). It would also be obvious to increase the Peplinski predetermined voltage, since during mains voltage failure, two 12-volt backup batteries are combined in series to supply 24-volts to the barrier operator (par 36). One skilled in the art would readily be able to replace the two 12-volt Peplinski batteries with one 24-volt battery,

which would inherently require a predetermined voltage greater than 20 volts in order to fully recharge.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peplinski, in view of Furukawa and Furst (US 5,844,328).

With respect to claim 9, Peplinski does not expressly disclose circuitry for selectively disconnecting the first battery terminal from the first conduction path when the first conduction path is disconnected from the input DC voltage.

Furst discloses a backup battery apparatus comprising a switch 72 that allows the backup battery 12 to be disconnected from the load 20 at any time desired by the user (fig 1, items 72; col. 6, lines 53-64). Peplinski, Furukawa and Furst are analogous because they are from the same field of endeavor, namely battery backup apparatuses that recharge during normal operation and discharge the voltage to a load when the main power source fails. At the time of the invention by applicant, it would have been obvious to combine the battery backup apparatus disclosed in Peplinski and Furukawa with the cutout switch disclosed in Furst in order to disconnect the battery to prevent any current discharge when the battery backup apparatus is not connected to a power source.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See also Epstein (US 4,675,538), from the IDS, which similarly shows the backup battery connected to the first conduction path through a diode.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adi Amrany whose telephone number is (571) 272-0415. The examiner can normally be reached on Mon-Thurs, from 10am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571) 272-2800 x36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AA

A handwritten signature in black ink, appearing to read "MS 9/29/07", is written over the printed name and title.

MICHAEL SHERRY
SUPERVISORY PATENT EXAMINER